

9 Apr 1991

## PS1KN-C

### POWER SUPPLY

**1. GENERAL.** This procurement requires a constant-voltage, constant-current solid-state dc power supply.

**2. CLASSIFICATION.** Type II, Class 5, Style F, and Color R in accordance with MIL-T-28800 for shipboard applications.

**3. OPERATIONAL REQUIREMENTS.** The equipment shall be capable of operation within the minimum accuracies, limits, and specifications identified below.

**3.1 Output voltage and current.** Continuously adjustable from 0 to 120 Vdc, 0 to 2.5A.

**3.1.1 Load regulation.** For no-load to full-load excursions: {120 mV voltage regulation, {25 mA current regulation.

**3.1.2 Line regulation.** For line-voltage variations of 10% : 60 mV voltage regulation, {25 mA current regulation.

**3.1.3 Ripple and noise.** 250 mVrms or 400 mV peak-to-peak maximum.

**3.1.4 Temperature coefficient.** 0.03% +20 mV voltage regulation for any one degree C change in the ambient temperature.

**3.1.5 Drift.** 0.1% + 60 mV for eight hours with constant line, load, and ambient temperature.

**3.2. Current limiting.** Current limiting shall be provided over the specified current range.

**3.3 Output indicator.** Voltage and current. Accuracy: {2% FS.

**3.4 Output connectors.** Three-way front-panel binding posts for the positive output, negative output, and chassis ground connections.

## **4. GENERAL REQUIREMENTS.**

**4.1 Power source.** MIL-T-28800 nominal power source requirements are invoked. Operation at 400 Hz is not required. Maximum power consumption: 500W.

**4.2 Weight.** 20 kg (44 lb) maximum.

**4.3 Lithium batteries.** Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.